

AVI 2723 Radar Homing and Warning Systems

Principles of radar homing and warning systems; includes functional diagram analysis and maintenance procedures.

AVI 2724 Stellar Metrics

Astral tracking systems theory and operation; includes block diagram and logic and circuit analyses of decommutators, simulators, and associated equipment.

AVI 2725 Electro-Optical Viewing Systems (EVS)

Theory of target sensing and display using low-light television, holography, and computer-aided graphics processing to detect and display targets; includes operational checkout, alignment, troubleshooting, and repair of EVS using specialized/standard test equipment.

AVI 2726 Radar Mapping

Principles, theory, and wiring diagram analysis of side-looking radar systems used in radar mapping; includes detailed analysis of receiver, transmitter, timing, antenna stabilization, and power distribution circuitry.

AVI 2727 Avionic Camera Systems Maintenance

Advanced camera systems alignment; includes camera controls, photographic sensitive controls, image motion controls, and camera magazines.

AVI 2728 Data Display Systems

Circuit analysis through use of logic symbols/schematics; includes troubleshooting and bench checks.

AVI 2729 Maintenance and Operation of Aircraft Test Equipment

Certification, repair, and operation of avionic test equipment used in troubleshooting, repair, and alignment of aircraft electrical components and test benches.

AVI 2730 Advanced Avionic Systems

Indepth avionic systems principles, characteristics, and uses; newest electronic innovations and repair techniques. Includes maintenance procedures/capabilities, limitations, and techniques in employment of avionic systems.

AVI 2731 Digital Interfacing Systems

Theory and maintenance of digital interface circuits, analog-to-digital, digital-to-analog, and digital-to-digital conversion circuits to include data-flow analysis, troubleshooting of conversion circuits, and tie-in to other digital/nondigital systems.

AVI 2732 Airborne Command Post Communication Systems

Advanced theory and operation of satellite communication systems; includes data flow, circuit, and system analyses.

Bioenvironmental Engineering

BEE 1301 Introduction to Bioenvironmental Sciences

Application of mathematics and physical/biological principles to personal protection and measurement of illumination and ionizing/nonionizing radiation.

**BEE 1302 Bioenvironmental Protection**

Concepts of acoustics; analysis of generation, measurement, and control of noise; principles of ventilation; and respiratory protection.

BEE 1303 The Occupational Environment

Principles of occupational health and toxicology, establishment of case files, environmental pollution detection and control, and use of detection devices to determine level of exposure to hazards.

BEE 1304 Water Systems Management

Collection and chemical testing of water samples; monitoring of water treatment facilities; and preparation of reports with recommendations for preventing contamination.

BEE 1305 Waste Management

Collection, treatment, and disposal of liquid and solid waste materials.

BEE 2010 Respiratory Protection

Development/management of respiratory protection programs within specific American National Standards Institute and National Institute of Occupational Safety and Health guidelines.

BEE 2300 Environmental Protection

Interpretation of standards and criteria applicable to environmental pollution control; implementation and evaluation of air, water, noise and solid-waste pollution surveys; and preparation of reports containing recommendations for co-control measures to ensure compliance with Environmental Protection Agency standards.

BEE 2301 Industrial Hygiene Measurements

Evaluation and control of industrial health/safety hazards based on standards set in Occupational Safety and Health Act, Department of Labor, and Environmental Protection Agency and practicum in sampling techniques and specimen collection and laboratory analysis of results.

BEE 2302 Radiological Hazards Identification

Identification, evaluation, and control of ionizing/nonionizing radiation hazards found in medical, industrial, and recreational facilities.

BEE 2313 Hearing Conservation

Measurement of auditory risk, automatic audiometer monitoring, selection and issue of personal ear protection devices, methods of monitoring noise exposure, and management of hearing conservation program.

BEE 2315 Lead Hazard Inspection

Lead hazard identification, field monitoring instruments, and environmental sampling.

BEE 2316 Hazardous Waste Operations

Evaluation and control of hazardous waste operations and remediation activities at hazardous waste sites in accordance with Occupational Safety and Health Administration standards.

BEE 2317 Pollution Prevention

Regulatory compliance, source reduction and management of wastes, and fundamental concepts of prevention.

BEE 2318 Site Restoration Tools, Techniques, and Technologies

Environmental laws/regulations and science and technology of hazardous site remediation/restoration. Includes environmental models, case studies, public notification, investigation techniques, and ecological risk assessment.

BEE 2319 Bioenvironmental Engineering Readiness

Medical readiness training program development and management. Includes peacetime and wartime plans; nuclear weapon accident response; hazardous material accident response; and medical aspects of nuclear, biological, and chemical warfare.

BEE 2320 Ionizing Radiation Management

Radiation protection development and management. Includes radioactivity and principles of radiation, interaction with matter, biological effects of radiation, external/internal dosimetry, radiation instrumentation, and transportation and disposal of hazardous materials.

Biomedical Equipment Technology

BET 1318 Biomedical Equipment Maintenance Management

Installation and troubleshooting of hydrotherapy, x-ray, environmental, vision measurement, and shock therapy systems. Safety procedures emphasized.

BET 1319 Therapeutic Support Equipment Systems

Theory, application, restoration, rectification, and renovation of electrical and mechanical apparatus used for therapeutic procedures; includes dental operating, ultrasonic, electrosurgical, anesthesia, and inhalation therapy systems.



BET 1320 Therapeutic Support Equipment Systems II

Theory, application, technical analysis, rectification, and renovation of electrical and mechanical apparatus used for therapeutic procedures; includes infusion devices, diathermy, infant incubator/isolette, dental laboratory, suction and pressure, sterilization, ultrasonic cleaning, and surgical/obstetrical suite environmental systems.

BET 1321 Diagnostic Support Equipment Systems I

Inspection, operation, troubleshooting, repair, and testing of tissue processing, optical magnifying, centrifuge, electronic particle counting, spectrophotometric, and flame photometer systems.

BET 1323 Diagnostic Support Radiographic Systems

Radiation physics and safety; design/maintenance of advanced diagnostic radiographic systems; and inspection, operation, troubleshooting, repair, and testing procedures applicable to medical/dental radiographic systems.

BET 1324 Physiological Monitoring System

Operation, inspection, analysis, and repair of hearing measurement, cardiac measurement, and other physiological monitoring systems.

BET 1325 Field Equipment Support Systems

Maintenance, operation, and inspection of power production, distribution, lighting, forced air, heat/air-conditioning, and refrigeration/steam generation systems.

BET 2308 Advanced X-Ray Principles

Principles and procedures used for installation, troubleshooting, repair, and calibration of x-ray systems. Includes image intensifier principles, closed-circuit television, dental x-ray, and three-phase radiologic systems.

BET 2318 Installation and Maintenance of X-Ray Systems

Practicum in setting up, troubleshooting, and repair of advanced radiologic systems, image intensifiers with closed-circuit television, and automatic collimator systems.

BET 2322 X-Ray Systems Technology

Preinstallation surveys; procurement, installation, and calibration of x-ray systems; radiographic and fluoroscopic principles; and Bureau of Radiological Health Compliance testing.

Carpentry

CAR 1501 Introduction to Carpentry

Construction materials, drawings, and technical publications. Selection of handtools and cutting materials for cabinet construction, joint fitting, surface sanding, and cabinet assembly.

CAR 1503 Building Construction

Light frame construction: includes scaffold, foundation, form, roof, porch, and stair construction.